

# HYDROCAL™ Combination Air, Dirt and Hydro Separator

NA549 ASME/CRN Series With Flanged Connections

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## Application

The Caleffi HYDROCAL™ combination air, dirt and hydro separator is a device that incorporates high performance air and dirt removal functionality into the hydro separation function which makes the primary and secondary circuits connected to it hydraulically independent, and can be used on hot or chilled water systems. The HYDROCAL features a proven stainless steel internal element that combines to continuously and automatically eliminate air micro-bubbles with the simultaneous removal of dirt particles as tiny as 5 microns. The air discharge capacity is very high, with the capability of automatically removing all the air present in the system down to the micro-bubble level. The 3 in 1 high performance functionality of the HYDROCAL saves system installation and maintenance cost as there is no need to include separate air and dirt separators.

## Typical Specification

Furnish and install on the plans and described herein, a Caleffi HYDROCAL as manufactured by Caleffi. Each separator must be designed with an epoxy resin painted steel body, a brass blowdown drain valve and automatic brass air vent with brass shutoff valve. The separator design must include ANSI B16.5 Class 150 RF flanges. The separator must be constructed in accordance with the latest revision of the ASME Boiler and Pressure Vessel Code, CRN Registered, and stamped for 150 psi (10 bar) working pressure. Each separator shall be Caleffi model NA549 or approved equal. (See product instructions for specific installation information.)

## Technical Data

Separator: 2"–6" ANSI B16.5 CLASS 150 RF FLANGED (ASME and CRN Registered)

Connections:  
- Air vent relief: 3/4" NPT Female  
- Drain valve: 1 1/4" NPT Female

Materials:  
- Separator body: Epoxy resin painted steel  
- Air vent body: Brass  
- Shut-off and drain valve body: Brass  
- Int. element: Stainless steel  
- Air vent seal: VITON  
- Air vent float: Stainless steel

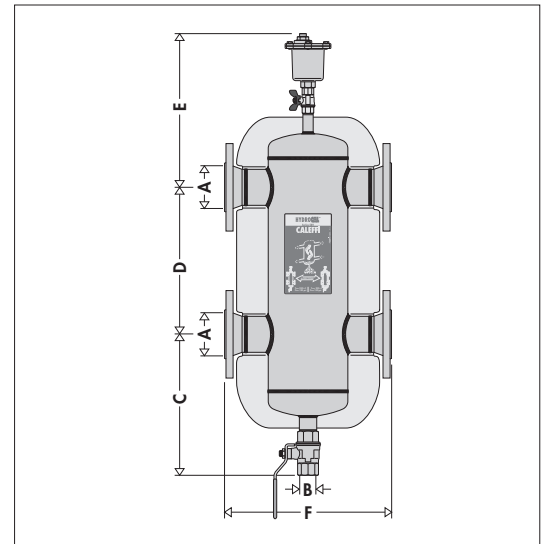
Medium: Water and non-hazardous glycol solutions up to 50%  
Max operating pressure: 150 psi (10 bar)  
Temperature range: 32–250°F (0–120°C)  
Particle separation capacity: to 5 µm

## Technical specifications of insulation

Inner part  
Material: rigid closed cell expanded polyurethane foam  
Thickness: 2 3/8" (60 mm)  
Density: 3 lb/ft3 (45 kg/m3)  
Conductivity (ISO 2581): 0.16 BTU/in (0.023 W/(m·K))  
Temperature range: 32–220°F (0–105°C)

Outer part  
Material: Embossed aluminium  
Thickness: 7-mil (0.70 mm)  
Fire resistance (DIN 4102): Class 1  
Head covers  
Heat formed material: PS

## Dimensions



Code	A	B	C	D	E	F
NA549052A	2"	1 1/4"	13"	13"	15"	14"
NA549062A	2 1/2"	1 1/4"	13"	13"	15"	14"
NA549082A	3"	1 1/4"	15"	17 3/4"	17"	18"
NA549102A	4"	1 1/4"	15"	17 3/4"	17"	18"
NA549150A*	6"	1 1/4"	15"	17 3/4"	17"	18"

Code	Weight (lb)	(kg)	Flow (gpm)	(l/sec)	Volume (gal)	(l)
NA549052A	73.0	33.1	37.0	2.3	4.0	15.1
NA549062A	79.0	35.8	62.0	3.9	4.0	15.1
NA549082A	108.0	49.0	94.0	5.9	8.0	30.3
NA549102A	117.0	53.1	148.0	9.3	8.0	30.3
NA549150A*	231.0	104.8	376.0	23.7	23.2	87.8

\*Without insulation.

## Hydraulic characteristics

The HYDROCAL should be sized according to the maximum flow rate at the inlet. The selected design value must be the greatest between the primary circuit and the secondary circuit.

Size	Flow Capacity				
	2"	2 1/2"	3"	4"	6"
gpm	37.0	62.0	94.0	148.0	376.0
l/sec.	2.3	3.9	5.9	9.3	23.7

We reserve the right to change our products and their relevant technical data, contained in this publication, at any time and without prior notice. Contractors should request production drawings if prefabricating

Job name .....  
Job location .....  
Engineer .....  
Mechanical contractor .....  
Contractor's P.O. No. ....  
Representative .....

Size .....  
Quantity .....  
Approval .....  
Service .....  
Tag No. ....  
Notes .....